

# CEREAL RUST BULLETIN

Report No. 1

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Issued by:

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- Wheat leaf rust is lighter than last year throughout the southern U.S. and central plains.
- No wheat stem rust has been found in the U.S. this year, but a 250-acre field of oats in southern Texas was destroyed by stem rust.
- Wheat and barley stripe rust foci were found in southern Texas plots.
- Both wheat and barley stripe rust are increasing in the western U.S. grain-growing areas.

Adequate moisture during the winter has resulted in good cereal growth throughout most of the area from Georgia to Texas. In southern and central Texas the wheat is in good condition and near normal crop maturity. In Kansas and Oklahoma most of the wheat crop is in good condition and there has been minimal winter injury. The warm weather in the northern spring small grain area has created optimism for early seeding of the crop.

**Wheat stem rust.** No wheat stem rust has been found in the U.S. as of April 6.

**Wheat leaf rust.** During the last week in March, wheat leaf rust severities ranged from traces to 60% on the lower leaves of cultivars in nursery plots throughout southern Texas. For example, plots of TAM 300 had traces of leaf rust, but TAM 107 had 60% severity. Commercial fields in southern Texas had rust severities ranging from traces to 20% on the lower leaves. In southern Texas, rust increased on the lower leaves when moisture was abundant, but rust increase farther up the plant has been limited, either because of recent dry weather or because earlier heavy rains washed the rust spores onto the ground. In early February in central Oklahoma, leaf rust was severe on the lower leaves, of some of the commonly grown cultivars. However, by early March leaf rust was less severe, since most of those rusted leaves died without the rust spreading to the younger leaves because of the dry weather in late February. In late March, rust severities were light throughout most of the Kansas fields and plots. In conclusion, leaf rust is lighter than last year in much of the southern and central Great Plains. However, with warm and moist conditions, rust will increase and in some areas be a problem while providing inoculum for the wheat-growing areas farther north.



In late March, along the U. S. Gulf Coast leaf rust was light in wheat plots and fields, due to heavy rains in February and early March which limited rust spread by washing the spores off the leaves.

In early April, wheat leaf rust severities were light in plots of southern soft red winter wheat cultivars in central Louisiana. In February and March, heavy rainfall in Louisiana did not allow the rust spores to move up the plants and therefore rust development has been limited. In early April, leaf rust was light in nursery plots in southern Arkansas.

**Wheat stripe rust.** In early April, wheat stripe rust foci rated at 40% severity were observed in a plot of the soft red winter wheat CK 9835 at the Uvalde, Texas experiment station. In other soft red winter wheat plots, rust severities ranged from traces to 5%. Most of the rust was found on the flag-1 leaves, indicating the rust did not overwinter in these plots.

In late March light stripe rust was reported in southern Arkansas.

By late March, wheat stripe rust was increasing in nurseries in the San Joaquin Valley in California, in the Walla Walla area in southeastern Washington and in the Skagit Valley of northwestern Washington.

NOTE: Stripe rust is vulnerable to heat and does not survive long at warm temperatures; therefore, if shipment of collections for race identification is delayed their viability will be poor. Please send wheat and barley stripe rust collections (10 or more rusted green leaves) as soon as possible after collecting to: Dr. Roland Line, USDA-ARS, 361 Johnson Hall, Washington State University, Pullman, WA 99164-6430.

**Oat stem rust.** On March 31, severe oat stem rust was observed in a 250-acre field of Harrison oats 10 miles north of Uvalde. In part of the field, the stem rust had destroyed the oat plants and within two weeks the crop will be totally lost to stem rust. The rust was noticed 6 weeks ago and it was sprayed with a fungicide, but it didn't stop the rust development. The farmer said that when the winds are strong from the south, you can see the dust (spores) heading north. This oat field will provide inoculum for areas farther north, but the lack of oat acreage in the central Great Plains tends to interrupt potential epidemics. In oat fields within a 20-mile radius of this field, no rust was observed.

In late March, traces of oat stem rust were observed in plots at Beeville and Beaumont, Texas and Fairhope, Alabama. This year stem rust has not been found in oat varietal plots in southern Louisiana, where it generally is found every year by early March.

**Oat crown rust.** During the last week in March, crown rust was severe in southern Texas plots and fields. Sixty-percent severities were common on the most susceptible cultivars in nursery plots. In southern Texas fields, rust severities ranged from 1 to 20% but on average, rust development was less than last year.

In late March, crown rust was light in varietal plots in southern Louisiana. Throughout the region from Georgia to Louisiana, rust development was much less than normal for this time of the year, probably because heavy rains have limited the spread of rust spores.

In early April, light amounts of crown rust were found on wild oats in Sonoma County, California.



**Barley stem rust.** As of April 6, no stem rust has been reported on barley in the U.S. this year. Limited amounts of barley are grown commercially in the southern states. Stem rust on barley rarely occurs in this area.

**Barley leaf rust.** During the last week in March, 10% leaf rust severities were observed on lower leaves in a few barley plots in southern Texas. In the other barley plots in the same nursery, lighter amounts were found.

**Stripe rust on barley.** In late March, barley stripe rust foci were found in winter barley plots at Uvalde, Texas. Forty-percent severities were common in the foci in the Sussex cultivar and in other cultivars, the severities ranged from traces to 2%.

By late March, barley stripe rust was moderate to severe on susceptible entries in nurseries of fall-sown spring barley in the Sacramento and San Joaquin Valleys in California. In early March, barley stripe rust was found near Corvallis, Oregon and by late March, stripe rust was prevalent in the Skagit Valley of northwestern Washington.

**Rye rusts.** During the last week in March, traces of leaf rust were found on leaves of winter rye in central Texas. No rye stem rust has been reported this year.

**Grass rusts.** As of April 6, no rust has been found on grasses growing along the roadside in the southern U.S. Normally by this date, leaf rust would be found on grasses in this area.

**Special Note:** If you currently receive the Cereal Rust Bulletin by regular mail but would prefer to receive it by email or receive notification when it is posted on our web page, please send a message to Mark Hughes (markh@puccini.crl.umn.edu).

The latest news on the current cereal rust situation in the U.S. can be found on our web page (<http://www.crl.umn.edu/CRB/crbupd.html>). If you have information on the cereal rust situation (or other small grain diseases) that you would like to share, please email your info to cereal-rust-survey@coafes.umn.edu or David Long (davidl@puccini.crl.umn.edu) and Mark Hughes at (markh@puccini.crl.umn.edu) or if you prefer, call Dave (612-625-1284). We would like to include your name and email address so others could contact you. If, however, you prefer not to have your name or email address appear with the information, we will omit them. Posting these messages will supplement the Cereal Rust Bulletins by making cooperators' reports available on the home page as they come in. Of course, we will continue to incorporate these reports into the regular issues of the Cereal Rust Bulletin. Generally, the Cereal Rust Bulletins are compiled every two weeks during the crop season. We welcome all comments or suggestions on how we can improve the bulletins or our home page.

Reports on distribution of races of cereal rust fungi are an important part of our surveys as reported in the Cereal Rust Bulletin. We regularly collect and test isolates of stem rust (wheat, oat, and barley), wheat leaf rust, and oat crown rust. We appreciate receiving collections of these rusts from cooperators around the U.S. If you would like to contribute, please contact Dave Long or Mark Hughes, and they will send you a packet of collection envelopes and forms.





Cereal Disease Laboratory (<http://www.crl.umn.edu>)